

Appl. No. 09/451,196  
Amdt. Dated 08/05/04  
Reply to Final Office action of 03/16/04

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A method ~~for scheduling~~ to schedule connections of traffic in a network, the method comprising:  
~~dividing creating N logical schedule tables from a hardware schedule table into N logical schedule tables having entries corresponding to connections,~~ the N logical schedule tables being separated by table delimiters and operating independently of one another, each of the table delimiters corresponding to at least one unused entry in the hardware schedule table; and  
assigning an identifier ~~in a scheduling table, the scheduling table being to an available entry in~~ one of the N logical schedule tables, the identifier corresponding to a one of the connection connections in the network.
2. (currently amended) The method of claim 1 wherein total size of the N logical schedule tables is equal to size of the hardware schedule table ~~each of the table delimiters corresponds to at least one unused entry in the hardware schedule table.~~
3. (original) The method of claim 2 wherein each of the N logical schedule tables corresponds to a class of service.
4. (original) The method of claim 1 wherein assigning comprises:  
determining if a first entry requested by the network for the identifier is occupied; and  
assigning the identifier to a second entry if the first entry is occupied, the second entry being available for occupancy.
5. (currently amended) The method of claim 4 wherein assigning further comprises ~~comprising:~~  
assigning the identifier to the first entry if the first entry is available for occupancy.
6. (currently amended) The method of claim ~~[[5]]~~ 4 wherein assigning further comprises ~~comprising~~ comprising:

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assigning the identifier to a third entry if the second entry coincides with one of the table delimiters, the third entry being a next available entry found from a beginning of the one of the N logical schedule tables scheduling table.

7. (original) The method of claim 6 wherein the network is an asynchronous mode transfer (ATM) network.

8. (original) The method of claim 7 wherein the identifier is a virtual channel identifier.

9. (currently amended) A computer program product comprising:  
a computer usable medium having computer program code embodied therein to schedule connections of traffic in a network, the computer program product having:

computer readable program code for dividing creating N logical schedule tables from a hardware schedule table having entries corresponding to the connections into N logical schedule tables, the N logical schedule tables being separated by table delimiters and operating independently of one another, each of the table delimiters corresponding to at least one unused entry in the hardware schedule table; and

computer readable program code for assigning an identifier to an available entry in a scheduling table, the scheduling table being one of the N logical schedule tables, the identifier corresponding to a connection in the network.

10. (currently amended) The computer program product of claim 9 wherein total size of the N logical schedule tables is equal to size of the hardware schedule table each of the table delimiters corresponds to at least one unused entry in the hardware schedule.

11. (original) The computer program product of claim 10 wherein each of the N logical schedule tables corresponds to a class of service.

12. (original) The computer program product of claim 9 wherein the computer readable program code for assigning comprises:

computer readable program code for determining if a first entry requested by the network for the identifier is occupied; and

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computer readable program code for assigning the identifier to a second entry if the first entry is occupied, the second entry being available for occupancy.

13. (currently amended) The computer program product of claim 12 wherein the computer readable program code for assigning further comprises comprising:

computer readable program code for assigning the identifier to the first entry if the first entry is available for occupancy.

14. (currently amended) The computer program product of claim 12 wherein the computer readable program code for assigning further comprising:

computer readable program code for assigning the identifier to a third entry if the second entry coincides with one of the table delimiters, the third entry being a next available entry found from a beginning of the one of the N logical schedule tables, scheduling table.

15. (original) The method of claim 14 wherein the network is an asynchronous mode transfer (ATM) network.

16. (original) The method of claim 15 wherein the identifier is a virtual channel identifier.

17. (currently amended) A system comprising:

a network interface bus;

a physical interface device coupled to the network interface bus to request a connection by an identifier; and

a network processor coupled to the network interface bus having at least a hardware schedule table to schedule connections of traffic in a the network and N logical schedule tables created from the hardware schedule table, the at least hardware schedule table having entries corresponding to the connections, being divided into the N logical schedule tables being separated by table delimiters and operating independently of one another, each of the table delimiters corresponding to at least one unused entry in the hardware schedule, the identifier being assigned to an available entry in one of the N logical schedule tables.

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18. (currently amended) The system of claim 17 wherein total size of the N logical schedule tables is equal to size of the hardware schedule table ~~each of the table delimiters corresponds to at least one unused entry in the hardware schedule table.~~

19. (original) The system of claim 18 wherein each of the N logical schedule tables corresponds to a class of service.

20. (original) The system of claim 17 wherein the identifier is assigned to a second entry if a first entry requested by the network for the identifier is occupied, the second entry being available for occupancy.

21. (original) The system of claim 20 wherein the identifier is assigned to the first entry if the first entry is available for occupancy.

22. (original) The system of claim 20 wherein the identifier is assigned to a third entry if the second entry coincides with one of the table delimiters, the third entry being a next available entry found from a beginning of the scheduling table.

23. (original) The system of claim 22 wherein the network is an asynchronous mode transfer (ATM) network.

24. (original) The system of claim 23 wherein the identifier is a virtual channel identifier.

25. (currently amended) A system comprising:  
a processor;  
a network processor coupled to the processor, the network processor having a scheduler for scheduling connections of traffic in a network using a hardware schedule table; and  
a memory coupled to the processor to store a program, the program, when executed by the processor, causing the processor to:

divide create N logical schedule table from the hardware schedule table, the N logical schedule table being into N logical schedule tables separated by table delimiters

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and operating independently of one another, each of the table delimiters corresponding to at least one unused entry in the hardware schedule table, and

assign an identifier to an available entry in a scheduling table, the scheduling table being one of the N logical schedule tables, the identifier corresponding to one of the connections ~~a connection~~ in the network.

26. (currently amended) The system of claim 25 wherein total size of the N logical schedule tables is equal to size of the hardware scheduler table ~~each of the table delimiters corresponds to at least one unused entry in the hardware schedule table~~.

27. (currently amended) The system of claim 26 wherein the program causing the processor to assign the identifier causes the processor to assign ~~wherein the scheduler assigns~~ the identifier to a second entry if a first entry requested by the network for the identifier is occupied, the second entry being available for occupancy.

28. (currently amended) The system of claim 27 wherein the program, ~~when~~ causing the processor to assign the identifier causes ~~in the scheduling table, causing~~ the processor to:  
assign the identifier to a third entry if the second entry coincides with one of the table delimiters, the third entry being a next available entry found from a beginning of the scheduling table.

29. (original) The system of claim 28 wherein the network is an asynchronous transfer mode (ATM) network.

30. (original) The system of claim 29 wherein the identifier is a virtual channel identifier.

31. (original) The system of claim 30 wherein the network processor is a segmentation and reassembly processor.